REMARKS

Dependent claim 36 was amended to correct an obvious typographical error.

The applicant does not agree with the rejection of independent claims 24 and 35 as being obvious over the combined teachings of Cook and Barnard.

Claim 24 recites:

"A method of controlling signal launch power of at least one optical signal in an add/drop node of an optical communication network, comprising the step of: pre-distorting the launch power of the at least one optical signal in accordance with a known value of a bandwidth of a modulation signal used to modulate the at least one optical signal, by passing the at least one pre-distorted optical signal through ***an optical amplifier of the add/drop node****, and by comparing a signal derived from an output of* ***the optical amplifier*** *with a reference signal dependent on the known value of the bandwidth of the modulation signal used to modulate the at least one optical signal by using a comparator."* [emphasis added]

The emphasis added by the applicant shows that the amplifier (from which the signal is derived for comparison) is the amplifier ***in the add/drop node*** where the optical signal is launched.

The applicant understands that the Examiner should take the broadest reasonable interpretation of a term(s) used in a claim in determining novelty and non-obviousness of the claimed invention. In this case, however, the applicant respectfully submits that the interpretation taken by the Examiner that "BER(2) is a signal derived from an output of the optical amplifier of the add/drop node where the signal is launched" is unreasonably broad.

The applicant submits that the BER(2) disclosed by Barnard is ***not*** a signal derived from an output of the optical amplifier of the add/drop node where the signal is launched.

Firstly, BER(2) is a ***numerical value*** of the bit error rate, and is not a signal. Nor does Barnard present BER(2) as a signal. The bit error rate (BER), as disclosed by Barnard, is always a ***value*** measured for a signal, but never a signal. Barnard describes the BER (bit error rate), as follows:

> "*For example, if the testing interval is chosen to be 1 minute and the bit rate is 2.5 Gb/s, then 15 errors/minute corresponds to a BER of 10^-10.*" (col. 5, lines 56-58) -- i.e., a numerical value;
>
> "*For example, the point of failure for a channel is defined herein when between 2 and 150 errors are counted in a minute, which corresponds to a BER range from 1.33x10^-11 to 10^-9 for a 2.5 Gb/s system.*" (col. 5, line 65 - col. 6, line 2) -- i.e., a value in a range;
>
> "*...BER(2) is the bit error rate measured after detection of the signal at the output of receiver R2.*" (col. 6, lines 23-24)" -- i.e., a value that is measured; and
>
> "*Alternatively, the actual readings of the BER(1) and BER(2) may be used...*" (col. 6, lines 47 - 48) -- i.e., a value that can be read.

Clearly, BER(2) is a value, and not a signal.

Secondly, irrespective of its character, BER(2) is ***not derived from an output of the optical amplifier of the add/drop node where the signal is launched*** (there is only one amplifier in claims 24 and 35). Instead, the value of BER(2) is measured at a ***receiver*** separated from the node where the optical signal was launched by a path that includes five amplifiers, a multiplexer, a

demultiplexer and four sections of fiber. In a real life network, this path would cover a distance of hundreds of miles. The BER(2) value, as described by Barnard, takes into account all these elements on the path.

The Examiner's attention is respectfully directed to the following excerpt from col. 6, lines 14-24 of Barnard to learn exactly what BER(2) is, and where the BER(2) value comes from:

> "*The link includes fiber spans 10', 20', 30' and 40' connecting optical amplifiers 10, 20, 30, 40, and 50 for amplifying channels lambda(1) and lambda(2). We note in the following the optical power output by transmitter T1 on channel lambda(1) with P(1)T, the loss introduced by span 20' to signal S1 travelling on channel lambda(1) with L(1)S, the power of signal S1 at the output of amplifier 20 with P(1)A, and the power at the input of receiver R1 with P(1)R. BER(1) is the bit error rate measured after detection of the signal at the output of receiver R1, while* ***BER(2) is the bit error rate measured after detection of the signal at the output of receiver R2***." [emphasis added]

Thus, BER(2) is a measured value and not a signal derived from the optical amplifier of the add/drop node where the optical signal was launched, but instead, is a value measured at a receiver output.

A conclusion that BER(2) is a signal derived from an output of the optical amplifier, as defined in claims 24 and 35, is possible only when an overly broad and unreasonable interpretation of the terms "derived" and "signal" is used (there are five amplifiers, a multiplexer, a demultiplexer and four sections of fiber between the node where the signal is launched and the node where the BER(2) value is measured). When a regular interpretation of these terms is used (as

they would be understood by a person of ordinary skill in the art), then BER(2) is not a signal, and is not derived from an output of the optical amplifier of the add/drop node where the optical signal is launched.

The above analysis shows that Barnard fails to disclose the features missing in the disclosure of Cook. In consequence, even if the person of ordinary skill in the art were to combine the teachings of Cook and Barnard, then the resulting combination would be different from the one claimed in the independent claims 24 and 35. Therefore, claims 24 and 35 are novel and non-obvious, together with their dependent claims.

Wherefore, a favorable action is earnestly solicited.

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